

**REMARKS / ARGUMENTS**

The present application includes pending claims 1-43. The Applicant respectfully submits that the claims define patentable subject matter. Claims 6, 7, 13, 16, 25, 26, 32, 36, 41, and 42 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. Claims 1-5, 8-12, 14-18, 20-24, and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over USPP 2002/0141441 ("Neumann"), in view of USP 5,918,040 ("Jarvis"). Claims 15-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Neumann, Jarvis and in view of USP 6,219,624 ("Russ"). Claim 19 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Neumann, Jarvis, Russ and in view of well known prior art (MPEP 2144.03). Claims 6, 13 and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Neumann, Jarvis, and further in view of MPEP 2144.03. Claims 7 and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Neumann, Jarvis, MPEP 2144.03, and further in view of USPP 2002/0186754 ("Kawai"). Claims 28-43 are rejected for the same rationale as used for claims 1-27. The Applicant respectfully traverses these rejections at least for the reasons previously set forth during prosecution and at least based on the following remarks.

### **Examiner's Response to Arguments**

#### **I. Arguments to the Rejection under 35 U.S.C. § 112, First Paragraph**

Claims 6, 7, 13, 16, 25, 26, 32, 36, 41, and 42 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. Specifically, the Examiner requests further explanation of how the **"additional timer value"** pertains to the **"second wireless communication protocol"** in Appellant's Figs. 10-13.

The Applicant maintains the arguments in the 8/31/09 revised Appeal Brief (see pages 15-17), that Applicant's Figs. 10-13 disclose that the respective sample counter 1104 and slot counter 1108 (see Fig. 11) provide the corresponding two counter values (i.e., timer values), that pertain to the WCDMA protocol (i.e., the second wireless communication protocol). In this regard, Applicant's Figs. 10-11 and their related description in the specification, support the notion that the **"additional timer value"** pertains to the **"second wireless communication protocol,"** as recited in Appellant's claim 6.

Furthermore, Applicant's Figs. 10-11 also support **Applicant's claim 7, which recites "said at least one timer value corresponds to a slot counter and said additional timer value corresponds to a sample counter."** For example, Applicant's Fig. 11 discloses a counter 1100 with two fields, namely, a sample counter field 1104 and a slot counter field 1108. Applicant's Figs. 12-13 disclose the timing values of both the sample\_cnt 1104 (i.e., the additional timer value) and the slot\_cnt 1108 (i.e., the one timer value), which are clocked at the rising edges of the WCDMA system clock (15.36

MHz) in the second wireless protocol communication. Accordingly, Applicant's claim 7 further clarifies both the "one timer value" and the "additional timer value", as recited in claim 6.

The Examiner states the following in the Office Action:

**"...The examiner emphasizes that counters are different than timer values. Counters refer to the number of occurrences of an event while timer values refer to the value of time.** Further, the specification fails to explain what role the timer value pertinent to second processor plays. The examiner further asserts that if a configuration or design for which protection is sought cannot be determined or understood due to an inadequate disclosure, then the claim, which incorporates the disclosure, fails to particularly point out and distinctly claim the subject matter applicant regards as their invention, see MPEP 1503.01-1504.04. The mere mentioning of "additional timer value" in claim 6 does not satisfy the enablement requirement because it is not clear how the additional timer value pertains to "said second wireless communication protocol." Further explanation or description of the additional time value pertaining to the second protocol is needed. **Applicant's referral to Figures 10-13 does not provide the necessary description or explanation of how the additional timer value pertains to the second protocol. The applicants need to identify how a timer value could be a slot value."**

See the Office Action in pages 12-13. In effect, the Examiner argues that claim 6's limitation "timer value", is not the same as the "counter value" in the fields of the counter 1100. The Examiner argues that "timer values" is defined as the "value of time". In other words, the Examiner seems to allege that Applicant's "timer values", must necessarily be **measured in actual time unit (e.g., seconds) only, and not as "counter value"**. The Applicant respectfully disagrees, and points out that Applicant's usage of time-related terms throughout the specification, such as **"timing**

synchronization", "**timing** information", "**timing** state", "**timer**" and "**timer value**" (see specification in page 5, lines 11-19), are related to the **clock cycles counted by a counter**. In other words, Applicant's above time-related phrases, such as the "timer value", are related to a "**counter value**", instead of an actual "value of time" measured in time units (e.g., such as in seconds), as alleged by the Examiner.

For example, the Examiner is referred to the following citation of Applicant's specification:

"Referring now to FIG. 12, 'there is shown a **timing diagram** 1200 which illustratively **represents a timing synchronization** method predicated upon execution of a direct access read operation. Pursuant to this synchronization method, the GSM/GPRS baseband processor 1001 performs a direct access read operation upon the "live" **counter values generated by the WCDMA master timer 1018**. Consistent with this direct access approach, **the fields of a given counter value generated by the WCDMA master timer 1018** are each read 1050 (FIG. 10) by the GSM/GPRS baseband processor 1001 **during a different deterministic WCDMA clock cycle.**"

See Specification at page 20, line 28 – page 21, line 4 (emphasis added). Applicant's Fig. 12 and the above citation disclose that timing synchronization is achieved by the GSM/GPRS baseband processor 1001, by directly reading the "live" (i.e., instantaneous) **counter values within the fields of a counter** (see Fig. 11), **until a given counter value** (in each of the two fields generated by the WCDMA master timer 1018) **is reached during a different deterministic** (i.e., predetermined) **WCDMA clock cycle**. Applicant's Fig. 11 further discloses that counter 1100 includes two fields, namely, a sample counter 1104 (counts from 0 to 10,239 clock cycles) and a slot

counter 1108 (counts from 0 to 14 clock cycles) at every rising edge of a system clock (e.g., a 15.36 MHz WCDMA system clock), and roll over (starts over).

Based on the above rationale, the Applicant maintains that Applicant's "timer value" in claim 6, is at least disclosed as a "counter value", and not as a "value of time" measured in actual time units. Likewise, the Applicant also maintains that Applicant's two "timer values" in claim 7, namely the "at least one timer value" and the "additional timer value", are supported by the respective fields of counter 1100 in Fig. 11, namely, the "slot counter" and the "sample counter". Accordingly, the Examiner is referred to Applicant's above explanation for the support to claims 13, 16, 25, 26, 32, 36, 41, and 42. The Applicant respectfully request that the rejection to claims 6, 7, 13, 16, 25, 26, 32, 36, 41, and 42 under 35 U.S.C. § 112, first paragraph be withdrawn.

## **II. Arguments to the Rejection of Claim 1 under 35 U.S.C. § 103(a)**

With respect to the rejection of claim 1 under 35 U.S.C. § 103(a), the Applicant maintains the arguments in the 8/31/10 revised Appeal Brief (see pages 18-23) that the combination of Jarvis and Neumann does not disclose "said host baseband processor enables timing synchronization between said **first and second wireless communications systems** on the basis of timing information transferred to said host baseband processor from said baseband co-processor," as recited in claim 1.

The Examiner concedes the following:

**"Neumann does not specifically disclose the host baseband processor enabling timing synchronization between the first and second wireless communication systems on the basis of timing information transferred to the host baseband processor from the baseband co-processor as claimed."**

See the Office Action in page 4. The Applicant points out that even though there may be synchronization in Neumann's GSM and TDMA communication networks (the alleged "first and second wireless communication systems"), nevertheless, Neumann has at least the following deficiencies: Neumann does not disclose or suggest that 1) "the host baseband processor" is the processor which performs "enabling **timing synchronization between the first and second wireless communication systems**", and 2) "**timing synchronization ... on the basis of timing information transferred to the host baseband processor from the baseband co-processor**".

The Examiner looks to Jarvis to disclose Neumann's above deficiencies and states the following:

**"Jarvis discloses a processor enabling timing synchronization between two network systems on the basis of timing information sent from another processor (Figures 1-5b, abstract, col. 2, lines 7-21 and 45-65, col. 3, and lines 35-67)."**

See the Office Action in page 4. The Applicant points out that Jarvis does not overcome Neumann's above deficiencies at least in the following ways:

1) The Examiner seems **to have improperly rejected Applicant's claim 1 based on un-recited claim limitations**. For example, Applicant's claim 1 recites "**said host baseband processor**" (i.e., not the baseband co-processor or any processor)

**"enables timing synchronization ...."** The Examiner in the Office Action, argues that Jarvis discloses **"a processor** enabling timing synchronization ... on the basis of timing information sent from **another processor"**. The Applicant points out that both the alleged "a processor" and "another processor" limitations are not recited in Applicant's claim 1.

2) Jarvis does not overcome Neumann's deficiencies by disclosing the alleged "host baseband processor" or "baseband co-processor". The Examiner seems to equate Jarvis' Master or Slave processor to Applicant's "host baseband processor" or "baseband co-processor". The Applicant disagrees, and refers the Examiner to the following citation of Jarvis:

"In the synchronization scheme according to the present invention, the processor, or timer which initiates the synchronization operation is hereinafter referred to as the master M and the processor responding to the synchronization operation is referred to as the slave S. **The identification of which processor is to be master or slave is arbitrary to the present invention, and may be determined by many other factors.** With reference to FIG. 2, the synchronization operation is initiated by the master according to some predetermined criteria. For example, the synchronization may take place at routine intervals. **At the outset of the synchronization operation, the master M issues to the slave S, a data packet containing a synchronization request and its current time value  $M_c$  (step 50).** The master M then awaits a response from slave S. The slave S receives the synchronization request and compares the issued master time value  $M_o$  with its own current slave time value  $S_o$  (step 52). **Three possible outcomes may arise from this comparison."**

See Jarvis at col. 3, lines 48-67 (emphasis added). More specifically, Jarvis' Fig. 1 discloses the two respective alleged processors, namely, the interface 30, and the packet processor 32. Jarvis in the above citation discloses an **arbitrary** Master/Slave

processor relationship. In other words, each of the two respective alleged processors can equally assume a Master or a Slave role, depending on other factors. In this regard, neither of the interface 30 or the packet processor 32 can respectively be designated as a Master processor or as a Slave processor, since the role may later be reversed, depending on other factors. Therefore, Jarvis' interface 30 or the packet processor 32 cannot be equated to Applicant's "host baseband processor" or "baseband co-processor".

Based on the above rationale, Jarvis does not overcome Neumann's above deficiencies by disclosing or suggesting "**said host baseband processor enables timing synchronization ...**" or "**... on the basis of timing information transferred to said host baseband processor from said baseband co-processor,**" as recited in claim 1.

3) Even assuming arguendo, that Jarvis' interface 30 or the packet processor 32 can be equated to Applicant's "host baseband processor" or "baseband co-processor" (which they cannot), **Jarvis is not a combinable reference with Neumann** to form a prima facie case of obviousness to reject Applicant's claim 1.

For example, Jarvis' timer synchronization (the alleged **timing synchronization**) takes place within two networks, namely the optical network 13 and Ethernet network 15, **neither one of which can be equated to Applicant's "wireless" communication systems.**



In addition, even assuming that Jarvis' optical network 13 and the Ethernet network 15 are the respective "first and second **wireless** communication systems", Jarvis still does not disclose or suggest Applicant's "timing synchronization **between** said first and second wireless communication systems". Jarvis' Fig. 1 discloses that the respective alleged processors (i.e., the interface 30 and packet processor 32), which perform timer synchronization (the alleged timing synchronization), operate within each of the respective line cards 12 and 14. Since line card 12 operates only within network 13 (optical network), and line card 14 operates only within network 15 (Ethernet network), therefore, Jarvis' timer synchronization (the alleged timing synchronization) takes place within the same network. In this regard, Jarvis does not overcome Neumann's deficiencies by disclosing or suggesting Applicant's "timing synchronization **between** said first and second wireless communication systems", as recited in Applicant's claim 1.

The Examiner also argued (see the Office Action in page 14) that the Applicant's "enabling synchronization" claim language is too broad. The Applicant respectfully disagrees and points out that the Examiner's argument is still moot, since Jarvis is not a combinable reference with Neumann, and Jarvis does not overcome Neumann's above deficiencies by disclosing or suggesting "said host baseband processor enables timing synchronization between said first and second wireless communications systems on the basis of timing information transferred to said host baseband processor from said baseband co-processor," as recited in claim 1.

Accordingly, the combination of Neumann and Jarvis does not establish a *prima facie* case of obviousness to reject independent claim 1, and the Applicant respectfully requests that the rejection to independent claim 1 under 35 U.S.C. 103(a) be withdrawn.

### **III. Claim Rejections under 35 U.S.C. § 112**

In response to the rejection of claims 6, 7, 13, 16, 25, 26, 32, 36, 41, and 42 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement, the Applicant maintains the arguments in pages 15-17 in the 8/31/09 revised Appeal Brief. In addition, the Examiner is also referred to the Applicant's above arguments in section I-A of the Examiner's Response to Arguments. Accordingly, the Applicant maintains that "the additional timer value pertains to the second wireless communication network" in claims 6, 7, 13, 16, 25, 26, 32, 36, 41, and 42 are supported in the specification. The Applicant requests that the rejection of claims 6, 7, 13, 16, 25, 26, 32, 36, 41, and 42 under 35 U.S.C. § 112, first paragraph be withdrawn.

### **CLAIM REJECTIONS UNDER 35 U.S.C. § 103**

In order for a *prima facie* case of obviousness to be established, the Manual of Patent Examining Procedure, Rev. 6, Sep. 2007 ("MPEP") states the following:

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 82

USPQ2d 1385, 1396 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."

See the MPEP at § 2142, citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), and *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval). Further, MPEP § 2143.01 states that "the mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art" (citing *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007)). Additionally, if a *prima facie* case of obviousness is not established, the Applicant is under no obligation to submit evidence of nonobviousness:

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

See MPEP at § 2142.

#### **IV. The Proposed Combination of Neumann and Jarvis Does Not Render Claims 1-5, 8-12, 14-18, 20-24, and 27 Unpatentable**

The Applicant turns to the rejection of claims 1-5, 8-12, 14-18, 20-24, and 27 as being unpatentable over Neumann in view of Jarvis.

##### **A. Rejection of Independent Claims 1, 9 and 20**

With respect to the rejection of claim 1 under 35 U.S.C. § 103(a), the Applicant maintains the arguments in the 8/31/10 revised Appeal Brief. In addition, the Examiner is referred to Applicant's above arguments in section II, that the combination of Jarvis and Neumann does not disclose "said host baseband processor enables timing synchronization between said first and second wireless communications systems on the basis of timing information transferred to said host baseband processor from said baseband co-processor," as recited in claim 1. The Applicant submits that claim 1 is allowable.

Independent claims 9 and 20 are similar in many respects to the device disclosed in independent claim 1. Therefore, the Appellant submits that independent claims 9 and 20 are also allowable over the references cited in the Final Office Action at least for the reasons stated above with regard to claim 1.

**B. Rejection of Dependent Claims 2-5, 8, 10-12, 14, 21-24, and 27**

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 9 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Neumann in view of Jarvis has been overcome and requests that the rejection be withdrawn. Additionally, claims 2-5, 8, 10-12, 14, 21-24, and 27 depend from independent claims 1, 9 and 20, respectively, and are also respectfully submitted to be allowable.

**V. The Proposed Combination of Neumann, Jarvis and Russ Does Not Render Claims 15-18 Unpatentable**

The Applicant turns to the rejection of claims 15-18 as being unpatentable over Neumann, Jarvis and in view of Russ.

**A. Rejection of Independent Claim 15**

With regard to the rejection of independent claim 15 under 35 U.S.C. § 103(a), the Applicant submits that the combination of Neumann and Jarvis does not disclose or suggest at least the limitation of **"generating within a multi-mode communication device, a timer capture interrupt during a predetermined timing phase of a first wireless communication system,"** or **"... determining a timing relationship between said first and second wireless communication systems** based upon said timer value," as recited by the Applicant in independent claim 15.

In regard to claim 15, the Office Action, at page 8, concedes the following:

"Neumann does not specifically discuss synchronization details e.g., generating a timer capture interrupt during a predetermined timing phase of a first wireless communication system, storing a timer value of at least one time pertinent to operation of the second wireless communication system in response to the timer capture interrupt; reading the timer value; and determining a timing relationship between the first and second wireless communication systems based upon the timer value in the format claimed by applicant."

The Examiner then relies on Jarvis for the deficiencies of Neumann, and states the following (*see* the Office Action, at page 8):

"Jarvis discloses generating a timer capture interrupt during a predetermined timing phase of a first communication system (Figures 2-5b and col. 3, lines 59-63, col. 4, lines 1-44, col. 5, lines 1-16, "master M issues to the slave S, a data packet containing a synchronization request and its current time value Mo" ), storing a timer value of at least one time pertinent to operation of said second wireless communication system in response to said timer capture interrupt (Figures 2-5b, col. 3, lines 64-67, col. 4, lines 1-44, col. 5, lines 1-16, "So"); reading said timer value (Figures 2-5b, col. 3, lines 64-67, col. 4, lines 1-44, col. 5, lines 1-16, "compares the issued master time value", note that comparing implies reading); and **determining a timing relationship between said first and second wireless communication systems based upon said timer value** (Figures 2-5b, col. 3, lines 64-67, col. 4, lines 1-44, col. 5, lines 1-16)."

See *id.* (emphasis added). The Applicant respectfully disagrees, and maintains the above arguments in section II, that Neumann's timer synchronization (the alleged "timing synchronization") takes place within the same network 13 or network 15, in the respective line cards 12 or 14. In this regard, Jarvis does not overcome Neumann's above deficiency by disclosing or suggesting "determining a timing relationship between said first and second wireless communication systems based upon said timer value," as recited in claim 15.

With regard to Neumann and Jarvis' above deficiency, namely, **"generating within a multi-mode communication device, a timer capture interrupt during a predetermined timing phase of a first wireless communication system,"** the Examiner relies on Russ and states the following (see the Office Action, at page 9):

"However, generating a timer capture interrupt is commonly used with timing synchronization, and it is conventional in the art, as disclosed by Russ. Russ discloses implementing timer capture interrupt in synchronizing an output timer interrupt (Col. 1, lines 45-67, "According to

the present invention an input capture timer interrupt **responds to the rising edge of the speed signal** and is used to synchronize an output compare timer interrupt that is scheduled to occur at a fixed time interval (every 2.048 milliseconds). Each time an input capture interrupt occurs a new measurement period IS started").

The Applicant points out that Russ merely discloses **a synchronous speed measurement** by comparing triggering (the alleged "timer capture interrupt") successive rising edges of an actual speed input with a fixed period (i.e., a time interval of 2.048 milliseconds). In other words, Russ's triggering (the alleged "timer capture interrupt") is an internal **synchronous speed measurement** reading, **which is not applicable to a communication device**. In this regard, Russ, likewise, is not a combinable reference with Neumann and Jarvis to establish a prima facie case of obviousness to reject Applicant's claim 15. The Applicant submits that claim 15 is allowable.

#### **B. Rejection of Dependent Claims 16-18**

Based on at least the foregoing, the Applicant believes the rejection of independent claim 15 under 35 U.S.C. § 103(a) as being unpatentable over Neumann, Jarvis, and Russ has been overcome and requests that the rejection be withdrawn. Additionally, claims 16-18 depend from independent claim 15, respectively, and are also respectfully submitted to be allowable.

#### **VI. The Proposed Combination of Neumann, Jarvis, Russ and MPEP 2144.03 Does Not Render Claim 19 Unpatentable**

Based on at least the foregoing, the Applicant believes the rejection of independent claim 15 under 35 U.S.C. § 103(a) as being unpatentable over Neumann,

Jarvis in view of Russ has been overcome and requests that the rejection be withdrawn. Additionally, MPEP 2144.03 does not overcome the deficiencies of Neumann, Jarvis and Russ. Claim 19 depends from independent claim 15, respectively, and is, consequently, also respectfully submitted to be allowable.

**VII. The Proposed Combination of Neumann, Jarvis, Russ and MPEP 2144.03 Does Not Render Claim 6, 13 and 25 Unpatentable**

Claims 6, 13, 19, and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Neumann, Jarvis, Russ and further in view of MPEP 2144.03. Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 9 and 20 under 35 U.S.C. § 103(a) has been overcome and requests that the rejection be withdrawn. Additionally, MPEP 2144.03 does not overcome the deficiencies of Neumann, Jarvis and Russ, respectively, claims 6, 13, 19, and 25 depend from independent claims 1, 9, 15, and 20, respectively, and are, consequently, also respectfully submitted to be allowable.

**VIII. The Proposed Combination of Neumann, Jarvis, MPEP 2144.03 and Kawai Does Not Render Claim 7 and 26 Unpatentable**

Claims 7 and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Neumann, in view of Jarvis, and further in view of MPEP 2144.03 and Kawai. Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 9 and 20 under 35 U.S.C. § 103(a) has been overcome and requests that the rejection be withdrawn. Additionally, MPEP 2144.03 and Kawai do not overcome the



deficiencies of Neumann and Jarvis, claims 7 and 26 depend from independent claims 1 and 20, respectively, and are, consequently, also respectfully submitted to be allowable.

**IX. Rejection to Claims 28-43**

Claims 28-43 are rejected for the same rationale as used for claims 1-27. Since the Examiner has not provided any additional arguments for the rejection of claims 28-43, the Applicant submits that these claims are allowable at least for the reasons stated above regarding the allowability of claims 1-27.

**CONCLUSION**

Based on at least the foregoing, the Applicant believes that all claims 1-43 are in condition for allowance. If the Examiner disagrees, the Applicant respectfully requests a telephone interview, and request that the Examiner telephone the undersigned Patent Agent at (312) 775-8093.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to the deposit account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

A Notice of Allowability is courteously solicited.

Respectfully submitted,

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